

# Fact Sheet



## *For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act*

Permit Number: **R30-07300022-2009**

Application Received: **August 19, 2008**

Plant Identification Number: **073-00022**

Permittee: **Pleasants Energy, LLC**

Mailing Address: **10319 South Pleasants Highway, St. Marys, WV 26170**

*Revised NA*

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Physical Location:	Waverly, Pleasants County, West Virginia
UTM Coordinates:	468.629 km Easting • 4353.573km Northing • Zone 17
Directions:	Site is located on the eastern side of State Route 2 in Pleasants County, approximately 1 mile east of Waverly

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### **Facility Description**

The facility is a 300 MW simple cycle electric generating peaking station operating under SIC 4911. The Pleasants Energy Station includes two General Electric (GE) 7FA class simple cycle combustion turbines, each nominally rated at 167.8 MW (while firing natural gas at an ambient temperature of 59° F and 60% relative humidity) including generator, exciter, and associated auxiliary mechanical and electrical systems. The primary fuel is natural gas. Low sulfur distillate fuel oil is utilized as a backup fuel.

Each gas turbine includes an advanced firing combustion turbine air compressor section, gas combustion system with advanced dry low NO<sub>x</sub> control, power turbine, and a 60-Hz, 13.8 (kV) generator.

## Emissions Summary

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2008 Actual Emissions</b>
Carbon Monoxide (CO)	116	0.12
Nitrogen Oxides (NO <sub>x</sub> )	241	4.346
Particulate Matter (PM <sub>10</sub> )	75	0.306
Total Particulate Matter (TSP)	75	0.306
Sulfur Dioxide (SO <sub>2</sub> )	53	4.100
Volatile Organic Compounds (VOC)	12	0.533
<i>PM<sub>10</sub> is a component of TSP.</i>		
<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>	<b>2008 Actual Emissions</b>
Total of miscellaneous non-major HAP (All individual HAPs have a PTE < 10 tpy)	11.8283	0.1152

*Some of the above HAPs may be counted as PM or VOCs.*

## Title V Program Applicability Basis

This facility has the potential to emit 241 tons per year (TPY) of NO<sub>x</sub> and 116 tons per year of CO. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, Pleasants Energy, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

## Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

### Federal and State:

45CSR6	Open burning prohibited.
45CSR11	Standby plans for emergency episodes.
45CSR13	Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, And Procedures For Evaluation
45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40CFR60.
45CSR30	Operating permit requirement.

45CSR33	Acid Rain Provisions and Permits
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
40 C.F.R. 60 Subpart GG	Standards of Performance for Stationary Gas Turbines.
40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. Part 72	Permits Regulation
40 C.F.R. Part 73	Sulfur Dioxide Allowance System Permits Regulation
40 C.F.R. Part 74	Sulfur Dioxide Opt-ins
40 C.F.R. Part 75	Continuous Emissions Monitoring
40 C.F.R. Part 76	Nitrogen Oxides Reduction Program
40 C.F.R. Part 77	Excess Emissions
40 C.F.R. Part 78	Appeals Procedure for Acid Rain Program
40 C.F.R. Part 82, Subpart F	Ozone depleting substances

State Only:

45CSR4	No objectionable odors.
45CSR39	NO <sub>x</sub> Annual Trading Program
45CSR40	NO <sub>x</sub> Ozone Season Trading Program
45CSR41	SO <sub>2</sub> Trading Program

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-2373A	January 19, 2006	
Acid Rain Permit	December 22, 2005	
CAIR Permit	March 22, 2007	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

### Determinations and Justifications

This is a renewal of the Title V permit issued on February 20, 2004. Changes to the original Title V Permit consist of the following:

- **45CSR10 - To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides.**

Subsequent to the issuance of the initial Title V permit, the director of the WVDAQ made the determination that internal combustion engines do not meet the definition of a “manufacturing process” as defined in Rule 10. Therefore the turbines are not subject to 45CSR§10-4.1. and Rule 10 is not applicable to this facility. The initial permit applied the 45CSR§10-4.1 limit to the turbines and streamlined it with the limit contained in the construction permit R13-2373A. This streamlining language has been removed from the renewal permit.

→ **45CSR26 - NO<sub>x</sub> Budget Trading Program as a Means of Control and Reduction of Nitrogen Oxides from Electric Generating Units.**

Pursuant to 45CSR§40-1.3., the provisions relating to ozone season NO<sub>x</sub> reduction requirements for applicable units under 45CSR26 shall not apply to the ozone season beginning in 2009 and any ozone season thereafter. The CAIR NO<sub>x</sub> Ozone Season Trading Program established by 45CSR40 commences May 1, 2009, replacing the ozone season NO<sub>x</sub> reduction requirements under 45CSR26 for such units. Therefore the requirements of Rule 26 have been removed from the permit.

→ **45CSR39 - NO<sub>x</sub> Annual Trading Program**  
**45CSR40 - NO<sub>x</sub> Ozone Season Trading Program**  
**45CSR41 - SO<sub>2</sub> Trading Program**  
**Clean Air Interstate Rule (CAIR)**

The two natural gas-fired turbines (GT1 & GT2) are affected units under these rules. Therefore these rules have been added to Section 3 of the permit and the CAIR application/permit has been included as Appendix B.

→ **The testing requirements for CO, VOC, PM<sub>10</sub>** contained in condition 4.3.1. of the initial permit has been satisfied. Continual compliance with the mass emission limits of these pollutants using the most recent test results is required in condition 4.4.1 of the renewal permit. Therefore the testing requirement has been removed from the permit.

→ **The Monitoring Requirement** contained in condition 4.2.3. of the initial permit to install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine has not been included in the renewal permit.

In a letter dated April 4, 2002 and addressed to Mr. James Hagedorn of Region III USEPA, Mr. David W. Faison of Dominion Energy, Inc. on behalf of Pleasants Energy, LLC (Pleasants) requested a waiver from such 40 CFR Subpart GG monitoring. NO<sub>x</sub> CEMs are required on the turbines through the Acid Rain program and Part 75 requirements and the turbines primarily burn pipeline natural gas. In a letter from Judith M. Katz of Region III USEPA dated May 5, 2002 and addressed to Mr. David W Faison of Dominion Energy, Inc. the waiver was granted.

→ **The fuel gas heater (NG1)** is owned and operated by Dominion Resources and located on Dominion's property. Pleasants Energy, LLC has no control of ownership or operation of the heater and therefore the heater and any applicable requirements to it have been removed from the permit. The heater is however considered to be a support facility to a Title V source and will need a Title V permit.

→ **Permit Shield** - The non-applicability of 40 CFR Subpart Dc listed in the initial permit pertained to the fuel heater NG1. Since NG1 has been removed from the permit (see discussion above) this “non-applicable” permit shield item is no longer required in the permit and therefore has been removed.

### Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

45CSR2	According to permit #R13-2373 the natural gas turbines (GT1 & GT2) are subject to 45CSR2. However, the turbines are not indirect heat exchangers and by definition are not fuel burning units. The turbines use the combustion gases to turn the turbine blades.
40 CFR 60 Subpart Kb	Tank T1 was constructed after July 23, 1984, has a capacity >151 m <sup>3</sup> and the fuel oil it stores has a true maximum vapor pressure less than 3.5 kilopascals. Therefore pursuant to 40 CFR §60.110b(b), tank T1 is exempt from this subpart.
40 CFR 60 Subpart KKKK	The combustion turbines were constructed prior to February 18, 2005 and therefore they are not subject to this rule.
40 CFR Part 64	The only potential PSEU applicable to turbines GT1 and GT2 is for nitrogen oxide (NO <sub>x</sub> ). NO <sub>x</sub> is the only pollutant from the turbines for which there are emission controls. The NO <sub>x</sub> controls for the turbines while burning natural gas are inherent to the design and operation of the turbines. Water injection is used to control NO <sub>x</sub> whenever fuel oil is fired in the turbines. NO <sub>x</sub> continuous emission monitors (CEMS) are specified in the original Title V permit in order to monitor NO <sub>x</sub> emissions thus satisfying the exemption of 40 CFR §64.2(b)(vi). Therefore the CAM rule does not apply to the turbines.

### Request for Variances or Alternatives

None

### Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

### Comment Period

Beginning Date:	July 29, 2009
Ending Date:	August 28, 2009

All written comments should be addressed to the following individual and office:

Frederick Tipane  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

### Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The

Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

**Point of Contact**

Frederick Tipane  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1215 • Fax: 304/926-0478

**Response to Comments (Statement of Basis)**

Not applicable.